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National Aeronautics and  
Space Administration

Jet Propulsion Laboratory  
California Institute of Technology  
Pasadena, California



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## Foreword

*JPL Bibliography* 39-32 describes and indexes by primary author the externally distributed technical reporting, released during calendar years 1990 and 1991, that resulted from scientific and engineering work performed or managed by the Jet Propulsion Laboratory. Three classes of publications are included:

- (1) JPL Publications (90- and 91-series) in which the information is complete for a specific accomplishment. Publications can be tailored to wide or limited audiences and can be presented in an established standard format or special format to meet unique requirements.
- (2) Articles from the quarterly *Telecommunications and Data Acquisition (TDA) Progress Report* (42-series). Each collection of articles in this class of publication presents a periodic survey of current accomplishments by the Deep Space Network as well as other developments in Earth-based radio technology.
- (3) Articles published in the open literature.

Effective January 1977, the "JPL Publication" replaced the Technical Report, Technical Memorandum, and Special Publication. However, the discontinued classes may still appear in future issues of the *Bibliography* if succeeding volumes or revisions are published in their former series.

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